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ABSTRACT

This document consists of a number of figures and diagrams suitable for overhead transparencies that illustrate and elaborate on the principles of failure-oriented training (a model for improving the effectiveness of instructional analysis). By adding a few simple steps to analysis, the resulting training will be closer to the idealized tutor: ever-present, all-knowing, and infinitely patient. Each user has different sets of training needs, centered around a perceived potential for failure. The illustrative material in this document presents the characteristics of the learner, the training environment, and technical implementation for the three orientations: training before failure, training during failure, and training after failure. Training before failure is effective when it is fully prescribed, consists of incremental steps, and is conducted in a protected environment. Examples include most self-paced training whether workbook, computer-based training, or interactive video display. Training during failure is characterized by on-demand implementation, student-controlled delivery, and a non-protected environment. Discovery learning (playing), embedded training, online help systems, job aids, and reference manuals are examples. Training after failure depends on behavioral diagnostics, coaching, and learning from one's mistakes. Examples include access to experts (hot-lines and support desks), troubleshooting and diagnostic tools, and problem-solving strategies. The document presents case study examples of training programs, including the new online education for the IBM AS/400 system to illustrate failure-oriented training.

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FAILURE-ORIENTED TRAINING

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FAILURE-ORIENTED TRAINING

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Courseware, Inc.

Failure-oriented training is a model for improving the effectiveness of instructional analysis. By adding a few simple steps to analysis, the resulting training will be closer to the idealized tutor: ever-present, all-knowing and infinitely patient.

Each user has three different sets of training needs, centered around a perceived potential for failure. We will present characteristics of the learner, the training environment, and technical implementation for the three orientations: training before failure; training during failure; training after failure.

Training before failure is effective when it is fully prescribed, consists of incremental steps and is conducted in a protected environment. Examples include most self-paced training whether workbook, CBT or IVD.

Training during failure is characterized by on-demand implementation, student-controlled delivery and in a non-protected environment. Discovery learning (playing), embedded training, on-line help systems, job aids and reference manuals are examples.

Training after failure depends on behavioral diagnostics, coaching and learning from one's mistakes. Examples include access to experts (hot-lines and support desks), trouble-shooting and diagnostic tools and problem-solving strategies.

We will present case study examples of training programs, including the new on-line education for the IBM AS/400 system, to illustrate failure-oriented training.

**Do the training products we build
truly support all users?**

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Readiness to be taught:

- **Before experiencing potential of failure**
- **When failure is imminent**
- **After experiencing failure**

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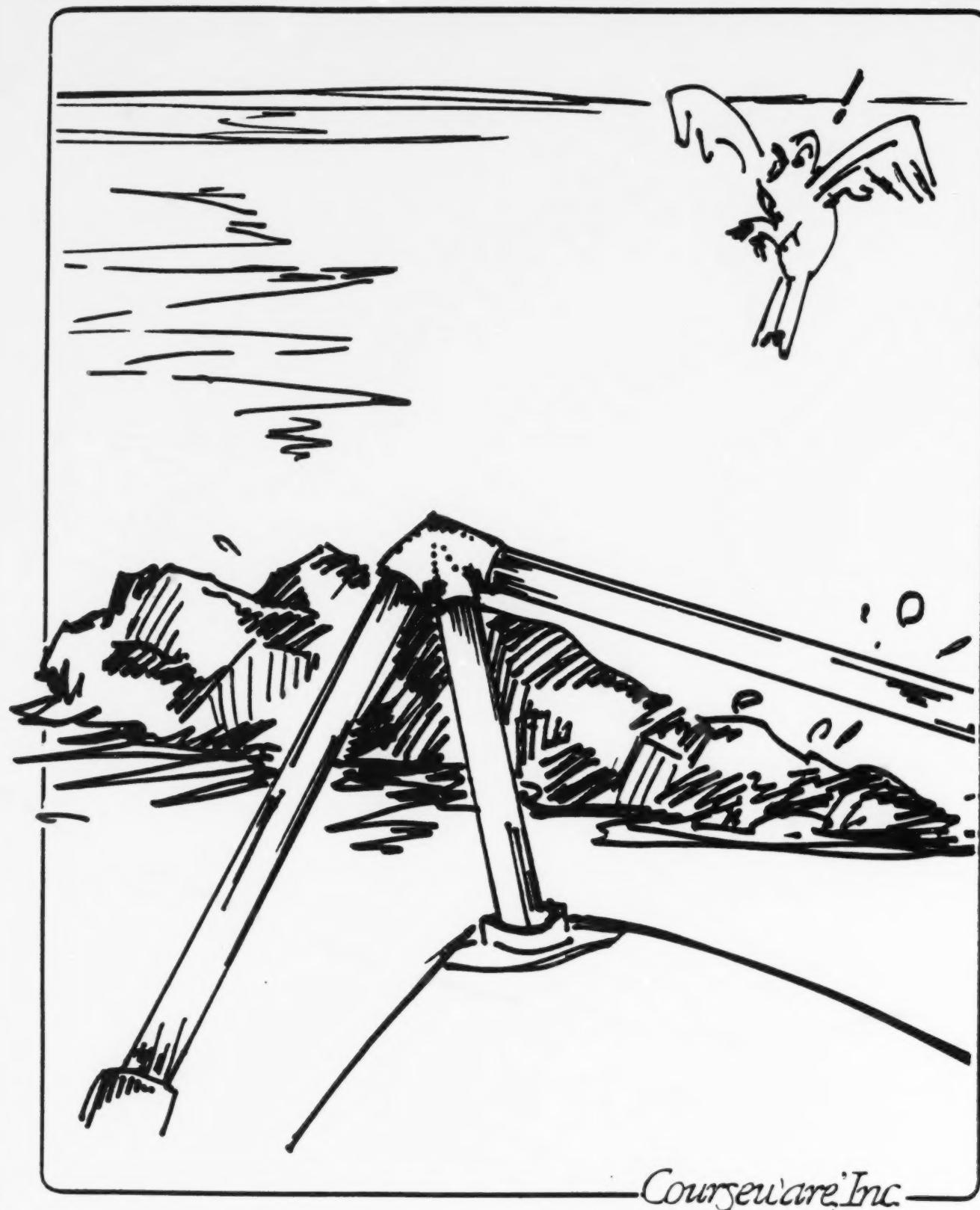
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Pre-failure Training:

- **Well designed content and sequence**
- **Incremental additions**
- **Pace controlled by learner**
- **Simulated failure in protected mode**

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At-failure Training

- **Present**
- **Pertinent**
- **Prescriptive**
- **Persistent**

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At-failure Strategies

- **Online helps**
- **Context sensitive information**
- **Quick reference cards**
- **Hot lines**

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Post-failure Training

- **Acknowledgement of the potential for success**
- **Diagnosed need for specific training**
- **Easy access to specific training segment**
- **Re-entry to pre-failure learning strategies**
- **Increased motivation and retention**

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Applying the Theory of Failure-Oriented Training

- **Evaluation of existing training**
- **Designing new training programs**
- **Managing the growth of employees**

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AS/400 Architecture

- **Pre-failure Support**
 - Tutorial Support Services
 - Part of operating system
 - Audience paths through CBT
- **At-failure Support**
 - Context sensitive online help
- **Post-failure Support**
 - Modular access to CBT
 - Q&A database

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Typical Architectures

- **Pre-failure Support**
 - Introductory tutorial diskette
 - Separate training book
- **At-failure Support**
 - F1 information that assumes knowledge of documentation
- **Post-failure Support**
 - Indexed by command, not by function

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Designing New Training

- **Analysis**
- **Design Architecture**
- **Development and Implementation**

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During Analysis

"What is the distribution of pre-, at-, and post-failure strategy learners?"

- **Comparable experiences**
- **Motivation**
- **Anxiety**
- **Risk of failure**

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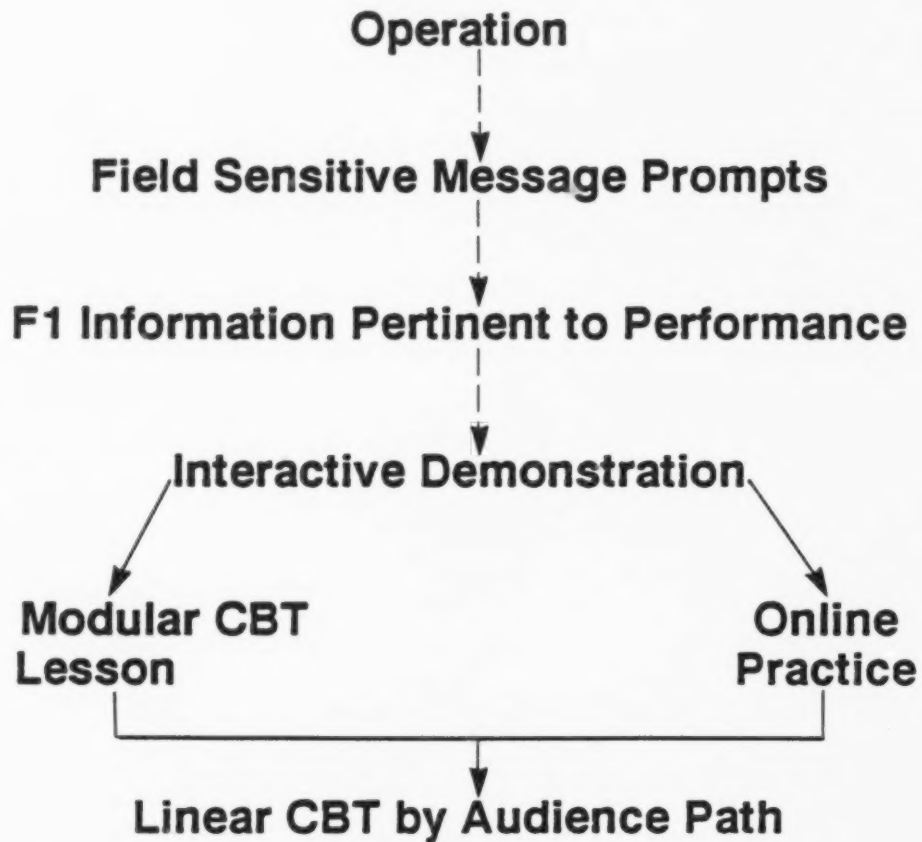
During Design Architecture

- **Access for each type of learner**
- **Architecture integrates all three strategies**

**For example, multi-level help system
integrated with CBT**

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Multi-level Help Integrated with CBT



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Development and Implementation

- **Developers to orient focus onto the perception of failure**
- **Demonstrate to all users the potential value of training**
- **Key words to attract the attention of at-and post-failure learners**

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Managing the growth of employees:

Assess the strategy of each individual

- **Pre-failure Learners**

Provide the time and resources for full training before a new challenge

- **At-failure Learners**

Quick intervention during one-on-one sessions

- **Post-failure Learners**

Can you afford the risk? Follow up quickly.

Can you not afford the risk? Role plays that simulate failure rather than success.

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Failure-Oriented Training

- **Three strategies for learning**
- **Training that supports all strategies supports all users**
- **Supporting all users makes a difference in performance**

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**Special thanks to
Stacy Dellas
for the cartoons.**

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